

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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In the Matter of

Deregulation/Privatization of Equipment
Registration and Telephone Network
Connection Rules.

CC Docket 99-216

COMMENTS OF SPRINT CORPORATION

SPRINT CORPORATION

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July 2, 1999

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Sprint Corporation ("Sprint") on behalf of its local, long distance and wireless divisions, submits its Comments in response to the Public Notice (DA 99-1108) issued June 10, 1999.

INTRODUCTION AND SUMMARY

Sprint appreciates, and is fully supportive of, the Commission's attempts to eliminate rules that have become unnecessary or otherwise obsolete due to changing conditions in the telecommunications marketplace. In the instant docket, the Commission has asked for comment on streamlining or eliminating equipment registration and telephone network connection requirements contained in 47 C.F.R. Part 68.

Prior to addressing the specific questions outlined in the Public Notice, Sprint stresses that its comments here are based on the network and the Part 68 rules as they exist today. In other words, Sprint makes no assumptions about the Commission's ultimate decision on the issue of line sharing and how, when implemented, line sharing would impact the Part 68 rules¹.

With respect to these particular rules, Sprint believes that uniform national rules regulating customer premise equipment ("CPE") are critical for the protection of the public switched telephone network ("PSN"). In particular, Sprint asserts that the present Part 68

¹ When the Commission adopts line sharing rules, it will be necessary to add a fifth category of harm to the existing definition in 47 C.F.R. 68.3 to address carrier-to-carrier degradation of service.

definition of network “harm” and its attendant technical requirements (those that speak to imposing electrical requirements on CPE) continue to be necessary. Those requirements were reviewed in 1997 in an effort by the Telecommunications Industry Association TR-41 that culminated in harmonization of the U.S. and Canadian terminal attachment requirements. Because the technology at the heart of the requirements is still in existence, this work should not be disturbed at this time (however, Sprint acknowledges that to accommodate the introduction of VDSL, updates to the rules will be necessary). Instead, efforts should focus on the transition to privatized regulations and manufacturer self-verification. Caution must, however, be exercised in this process so as not to place the network at risk. Toward that end, Sprint supports the development of a new, nationwide safety mark and a program of education for manufacturers and retailers regarding the requirements and penalties of a privatized process that could replace the Commission’s certification process in the future. Due to its extensive expertise, Committee T1 of the Alliance for Telecommunications Industry Solutions should be an active participant in the development process and beyond. Ideally, a new American National Standards Institute standard, preferably produced by Committee T1, will provide technical requirements, with Part 68 incorporating that standard by reference. Penalties and enforcement must continue under any circumstance. Sprint submits that adopting this model would transition government regulation to market-based regulation without posing risk to the PSN.

1. SPRINT'S PROPOSAL

Below, Sprint addresses the specific questions outlined in the Public Notice. First, however, it wishes to outline what it believes to be the proper plan for transitioning away from Part 68 rules. To begin, Sprint asserts that it is essential that some form of technical requirements be in place at all times so that, under all circumstances, the PSN is protected. While supporting the Commission's desire to move CPE regulation away from its oversight, Sprint asserts that it would be a grave error to eliminate the Part 68 technical rules before industry standards to take their place can be created and implemented. Therefore, Sprint's proposal would leave in place, for the time being, the Part 68 technical rules. At the same time, the industry - specifically Committee T1, a part of the Alliance for Telecommunications Industry Solutions ("ATIS") - should work to establish standards to replace the Part 68 rules. The Commission's staff should serve a monitoring role in this process.

Concurrent with the industry's work, the Commission should begin to remove itself from the administrative tasks associated with the CPE registration process. Specifically, the Commission should replace its current application review process with a manufacturer's self-verification program in the Part 2 and Part 68 administrative rules. Moreover, a national "safety mark" should be established to replace the current FCC mark. Such a mark would be placed on all standard-conforming equipment. As an additional safeguard, a national electronic database should be created to document manufacturer self-verified products. This database could logically be housed at a website maintained by ATIS or similar organization.

Finally, once industry standards are established, they should replace the current Part 68 rules. However, in keeping with the goal of ensuring protection of the network at all times, there must be a transition period during which the current and newly adopted Part 68 administrative rules would overlap. Once the new standards are firmly in place, the current

Part 68 technical and administrative rules can be eliminated in their entirety. Part 68 will then contain only the new industry standard and administrative rules.

2. The Traditional Definition of “Harm” to the Network is Still Applicable

The very basis of many of this Commission’s rules is the delivery of high-quality, uninterrupted telephone service. It is unarguable that avoiding harm to the PSN is essential to meeting those goals. Toward that end, the Commission’s rules prohibit connection to the network of any equipment that may result in harm to the network. “Harm” is defined specifically as: “[E]lectrical hazards to telephone company personnel, damage to telephone company equipment, malfunction of telephone company billing equipment, and degradation of service to persons other than the user of the subject terminal equipment, his calling or called party.”²

However, in today’s CPE market, new design and test personnel of manufacturers sometimes lack a thorough understanding of the network. In such an environment, the Commission’s Part 68 regulations provide essential education for both designers and test lab personnel. And, practically speaking, the knowledge that the Commission, pursuant to its authority outlined in Part 68, will examine CPE test results is a prime motivator for compliance with the rules. In order to maintain the present high degree of network protection, this compliance hurdle must not be removed unless and until something else has been devised to replace the regulator’s role. Sprint believes more manufacturer and retailer education regarding the penalties for products failing to conform could serve that purpose³.

Even with technological advances, non-conforming CPE has the capability of compromising the integrity of the network – and injuring company personnel – should it create high voltage or leakage currents. As long as there are copper loops, telephone

² 47 C.F.R. 68.3

³ See, 47. C.F.R. 1.80 in which the Commission’s authority to assess forfeitures is outlined.

company employees and equipment will be subject to harm from any high voltage and leakage currents generated by CPE. Sprint is aware that National Electrical Code (NEC) requirements are designed to provide protection from high voltage and leakage current hazards. However, some CPE is sold without a safety listing by any Nationally Recognized Testing Laboratory (NRTL). Moreover, Sprint notes that each NRTL places its own mark on the equipment, rather than having a common, nationwide safety mark. This lack of uniformity makes it difficult for retailers to know whether or not equipment they are selling is in compliance with NEC requirements – or perhaps even that NEC requirements exist. Under these circumstances, Sprint concludes the Commission's Part 68 hazardous voltage requirements provide a necessary measure of network protection.

Non-conforming CPE is also capable of interfering with company billing equipment. While admittedly few in number, there remains in operation certain older billing equipment that depends on inband signaling. In order to protect this equipment, it is necessary that requirements exist to define acceptable energy frequencies. Non-conforming CPE can also degrade service to third parties. For example, when copper plant is in use, it is necessary to control signal levels and frequencies to avoid crosstalk to other users. It is also essential that CPE have high balance numbers to prevent the induction of noise into third party circuits in the presence of induced power line voltages. Similarly, for switches, it is necessary to control unnecessary service requests that can potentially cause network blocking. Blocking can occur if a significant percentage of analog CPE does not have a sufficiently high on-hook resistance, or goes off-hook for no valid reason. Degradation of service thus remains a valid concern.

The present rules are sufficient at this time to address this concern. However with the introduction of ADSL and line sharing, new services and new network operation paradigms will create the need for new requirements. Today, for example, Part 68 covers out-of-voiceband energy only up to 6 MHz. Newer CPE can operate up to 10 MHz and

could cause crosstalk into future VDSL (Very High Speed Digital Subscriber Loop) services. VDSL needs to be protected up to 25 MHz. Therefore, while it is important from a network protection perspective to maintain, for the time being, the rules that currently exist, the Commission must recognize that its standards cannot remain static as technology changes.

2. Responses to Specific Questions Set Forth in the Public Notice

Regarding the specific questions outlined in the Commission's June 10, 1999 Public Notice, Sprint offers the following responses, arranged in accordance with the relevant forum numbers provided in the Notice.

A. Forum Number 1

(i) As C.F.R. Part 68 stands now, what rules are clearly no longer necessary?

Sprint believes all the technical rules in existence today are still necessary. Any of the technical rules that had become obsolete were weeded out in a long and at times contentious effort led by TIA, in which Industry Canada and CPE manufacturers participated and over which the Commission's staff acted as a monitor. This effort resulted in the Commission's decision to harmonize Part 68 with Canadian equipment regulations⁴. Sprint asserts that there have been no pertinent technological changes since the issuance of that decision which would warrant eliminating any of the current requirements. Under these circumstances, Sprint believes it would be unwise to invest time and resources in a process that would yield little, if any, immediate benefit.

(ii) If specific criteria are necessary to protect the telephone network, what are they, and why are they necessary?

⁴ See, *In the Matter of Amendment of Part 68 of the Commission's Rules*, CC Docket 96-28, FCC Rcd 19218, (Order rel. August 22, 1997).

As noted above, Sprint believes that the Commission's Part 68 rules, in their current state, work well to protect the telephone network. However, it is of course, possible to revise the rules to be more succinct while enhancing both the accuracy and clarity of the rules. For example, as described above, new criteria yielding protection up to 25 MHz will be necessary to shield VDSL services from harm caused by the crosstalk potential of Home PNA⁵.

As outlined above in its proposal, Sprint believes the criteria necessary to protect the network should ultimately be defined by industry standards through the work of Committee T1.

(iii) If criteria to protect the network are necessary, how shall these criteria be structured to address the requirements of new technology?

Sprint believes the criteria should continue to be organized by technology. In the past, different technologies (e.g. POTS, ISDN) were installed on separate loops, making tracking a relatively simple task. Today, however, there is more opportunity for confusion when two services (e.g. POTS, ADSL) are placed on one copper loop. Therefore, any criteria put in place to protect the network must take into consideration the relationships among the different technologies being deployed. Therefore, as Sprint argued in its comments on line sharing and spectrum management⁶, the Committee T1 can provide valuable insights on these relationships due to the depth of expertise among its membership, which includes a number of telephone company equipment manufacturers and telephone companies (both incumbent local exchange companies and competitive local exchange companies).

⁵ Home PNA service will transmit signal between 6 and 10 MHz towards the network.

⁶ See, *In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Services*, CC Docket No. 98-147. Sprint comments filed June 15, 1999.

B. Forum Number 2.

(i) Can we create a new paradigm in the private sector to replace C.F.R. Part 68 and continue to protect the telephone network from harmful CPE or interconnection? If so, how shall such a transition be made?

Sprint believes that indeed Part 68 may, and eventually should, be replaced by an industry standard. Currently, there are two groups that conceivably could serve in the role of an industry standard-setting body. One is the Telecommunications Industry Association (“TIA”) which sponsors the Committee TR-41.9. This committee is a CPE technical regulations working group made up of manufacturers of telephone and PBX equipment and a few telephone companies. While this committee provides valuable insights, Sprint suggests that it would be imprudent to place future responsibility for network protection on what, in reality, is a CPE manufacturers’ association

The second industry body, and the one recommended by Sprint for this task, is the ATIS’ Committee T1. This committee is uniquely qualified to deal with the complex issues associated with introducing new technologies without introducing harm to the network. Unlike TR-41.9, Committee T1 includes central office switch engineers from the equipment manufacturers. In addition, telephone industry – including both incumbents and new entrants - participation on Committee T1 is much greater than it is in TR-41. Consequently, the level and breadth of network expertise available at Committee T1 will provide a clear future perspective, which is absolutely necessary to the task at hand.

(ii) What level of Government oversight, if any, is necessary to implement 47 C.F.R. Part 68 rules and criteria, and why?

In Sprint’s opinion, the Commission’s role should be limited to providing the necessary oversight to (1) provide for protection of the network; (2) maintain the minimum criteria for equipment connected to the network; and (3) ensure the public interest is served. To the extent the Commission decides to rely less on Part 68 rules and move instead toward industry self-regulation, Sprint believes that broad industry participation is essential to the

development of new standards. Moreover, Sprint asserts that the Commission's staff should serve as a monitor of those industry efforts by participating as an observer and resource in the most relevant standards meetings. Once standards are adopted, the Commission must take appropriate enforcement activity to ensure that the public interest is preserved.

(iii) What safeguards or procedures, if any, should be implemented to address issues that private industry may not be able to resolve?

First, there must be a minimum list of essential information to be disclosed when a manufacturer self-verifies a product. Additionally, there should be appropriate penalties for manufacturers that "verify" their equipment complies with network harms requirements when, in fact, the equipment does not comply. Finally, Sprint asserts that there must be means for carriers and manufacturers to resolve disputes regarding whether or not a given model of equipment alleged to have harmed the network meets the Part 68 requirements.

(iv) What policies and rules should be implemented to privatize any remaining 47 C.F.R. Part 68 rules?

While Sprint encourages the Commission to transition Part 68 technical rules to the industry, it is imperative that this privatization results in neither disruption to ongoing product development or harm to the network. Toward that end, Sprint suggests that the present technical requirements and procedures remain in effect until the transition has been completed and alternative protections are safely in place.

In the mean time, the Commission should move toward the implementation of a self-verification process for equipment manufacturers, as well as a national safety mark and education program. Sprint asserts that a key to the success of privatizing Part 68 requirements will be strengthening the verification requirements for manufacturers. Currently, the Commission's rules⁷ direct a manufacturer to merely make a declaration that its product is in compliance with Commission standards - the validity of that declaration is

not verified by any outside source. In order to be effective, the verification process must carry with it responsibilities and penalties for ignoring those responsibilities.

In order to provide an easy and efficient tracking process, Sprint urges the adoption of a national safety mark to be used on all manufacturer self-verified products. This mark can be negotiated with and owned by an industry group such as TIA or ATIS, and licensed to all applicants at a minimal cost.

In the meantime, an industry standard can be published duplicating the Part 68 present technical requirements. This standard can be updated as needed. After industry consensus is reached the new rules will become effective and coexist simultaneously with the present rules for a limited time. Manufacturers can, in an orderly manner, transition their new or modified products to compliance with the new rules. Then, on a date certain, the former rules will be eliminated. During the time period when both sets of rules are in existence as well as for a reasonable time thereafter, the Commission should have a program in place to respond to formal or informal complaints of harm resulting from non-complying “verified” equipment.

C. Forum Number 3.

(i) Can the registration/certification procedural rules be streamlined (whether implemented by Government or by private entities)?

Sprint suggests that the Canadian Terminal Attachment Program should be viewed as a template for streamlining the Commission’s current processes. Canada’s program allows it to move more quickly than the U.S. to change terminal attachment rules, yet there is no less industry satisfaction or public interest protection. Government and industry representatives work together to find solutions and write the resulting rules. Once agreed upon, these solutions are published in the Canadian equivalent of the Federal Register and

⁷ 47 C.F.R. 2.902

become effective 60 days later. Following this model, the Sprint proposal calls for the industry standards setting body to create the necessary standard to which the Commission's regulation would then direct telephone companies and equipment manufacturers.

Revising the manufacturer verification process would complete the model. In other words, the Commission should be removed from most Part 68 administrative functions while the rules would be modified to allow manufacturer self-verification that their equipment meets all relevant requirements. An industry organization, such as ATIS or TIA, would then create and maintain a website database containing a list of all manufacturer self-verified products. This database would replace the present Commission paper-database, yet serve the same function. Manufacturers would be expected to submit a database entry prior to sale of any self-verified product. An industry education program should raise manufacturers' and retailers' awareness of the need to continue protecting the networks through the self-verification process and of the penalties for failure to comply.

The transition to this model would call for new rules to become effective on certain dates. To minimize manufacturer mis-steps, however, the current rules could also be effective for a limited period of time (allowing manufacturers to choose either set of rules on a per product basis) until the industry has had time to move to the new paradigm. Upon a date certain, the current rules would be removed from effective status.

(ii) What portions of the Guide to FCC Form 730 should be implemented as procedural rules?

Sprint believes that the TIA's TR-41.11 committee should make recommendations regarding Form 730. Sprint would participate in the committee's efforts and would support any recommendations developed.

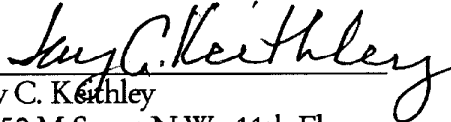
(iii) What portions of the Guide to FCC Form 730 are no longer necessary?

TIA's TR-41.11 committee is currently addressing this question in co-operation with Commission's staff. Sprint is participating in that effort, and will support the working group recommendations.

CONCLUSION

As noted above, Sprint believes that the industry and the Commission should work together to create a new paradigm for CPE requirements. While there should be a move toward privatization of industry-created standards, the Commission and its staff should continue to participate in the most relevant industry standards committee activities. These new standards, paired with today's penalties and enforcement actions, will ensure that the goals of both the Commission FCC and the industry can be achieved.

Respectfully submitted,
SPRINT CORPORATION

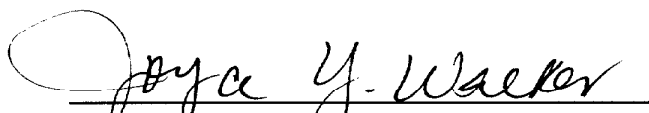
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CERTIFICATE OF SERVICE

I, Joyce Y. Walker, hereby certify that I have on this 2nd day of July 1999, served via U.S. First Class Mail, postage prepaid, or Hand Delivery, a copy of the foregoing "Comments of Sprint Corporation," In the Matter of Deregulation/Privatization of Equipment Registration and Telephone Network Connection Rules, CC Docket No. 99-216, filed this date with the Secretary, Federal Communications Commission, to the persons listed below.


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